

Amendments to the Claims

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This listing of claims will replace all prior versions, and listings, of claims in the application.

1 through 5 (canceled)

6. (currently amended) A generally cylindrical mounting pin for securing a sieve element to a support frame comprising:

a head having an upper surface intersecting with an under surface at an outer edge spaced away from an axis of symmetry of the head, the upper surface generally tapering substantially continuously from the outer edge towards the axis of symmetry, the under surface forming a first angle from the axis of symmetry that is greater than a second angle formed from the upper surface to the axis of symmetry; and

a stem having a narrower cross-section than the head, the stem being adjacent to the under surface of the head and extending away from the head to a distal end, the distal end having a mounting mechanism configured to attach to the support frame.

7. (previously presented) The mounting pin of claim 6 wherein a difference between the first angle of the under surface and the second angle of the upper surface is great enough that an insertion force needed to insert the mounting pin into a receptacle formed between sieve elements is lower than a removal force needed to remove the mounting pin from the receptacle.

8. (previously presented) The mounting pin of claim 6 wherein the head comprises a flat top adjacent to the upper surface of the head, the top extending towards the axis of symmetry and spaced apart from the stem so that the head defines a frustoconical shape.

9. (previously presented) The mounting pin of claim 6 wherein the head comprises a rounded top adjacent to the upper surface of the head, the top extending towards the axis of symmetry and spaced apart from the stem.
10. (previously presented) The mounting pin of claim 6 wherein the upper surface comprises a rounded shape extending towards the axis of symmetry and spaced apart from the stem.
11. (previously presented) The mounting pin of claim 6 wherein the upper surface of the head extends towards the axis of symmetry and spaced apart from the stem so that the head defines a conical shape.
12. (previously presented) The mounting pin of claim 6 wherein the mounting mechanism of distal end of the stem comprises a slot sized to receive a portion of the support frame.
13. (previously presented) The mounting pin of claim 6 wherein the mounting mechanism of distal end of the stem is configured such that the mounting pin can be bolted to a portion of the support frame.
14. (previously presented) The mounting pin of claim 6 wherein the cross-section of the stem is wider than a width of a portion of the support frame that the mounting pin is configured to be attached.
15. (previously presented) The mounting pin of claim 6 wherein the cross-section of the stem is narrower than a width of a portion of the support frame that the mounting pin is configured to be attached.
16. (previously presented) The mounting pin of claim 6 wherein the head and stem are formed from a unitary structure.

17. (previously presented) The mounting pin of claim 6 wherein the head and stem are formed from different materials.
18. (previously presented) The mounting pin of claim 6 wherein the head comprises an abrasion resisting material.
19. (previously presented) The mounting pin of claim 6 wherein the head comprises a composite of materials.
20. (previously presented) The mounting pin of claim 6 wherein at least one of the head and stem comprises steel.
21. (previously presented) The mounting pin of claim 6 wherein at least one of the head and stem comprises polyurethane.
22. (previously presented) The mounting pin of claim 6 wherein at least one of the head and stem comprises ceramic.
23. (previously presented) The mounting pin of claim 6 wherein at least one of the head and stem comprises plastic.
24. (previously presented) The mounting pin of claim 6 wherein the first angle formed between the under surface and the axis of symmetry is between 85 and 95 degrees.
25. (previously presented) The mounting pin of claim 6 wherein the under surface is substantially perpendicular to the axis of symmetry.
26. (previously presented) The mounting pin of claim 6 wherein the second angle formed between the upper surface and the axis of symmetry is between 45 and 60 degrees.

27. (previously presented) The mounting pin of claim 6 wherein the outer edge formed by the intersection of the upper surface and the under surface is relatively sharp.
28. (previously presented) The mounting pin of claim 6 wherein the outer edge formed by the intersection of the upper surface and the under surface includes a cylindrical section interposed between the surfaces.
29. (previously presented) The mounting pin of claim 6 wherein the outer edge formed by the intersection of the upper surface and the under surface includes a radius section forming a gentle transition between the surfaces.
30. (previously presented) A support frame having a plurality of the mounting pins of claim 6 mounted thereto, the support frame comprising a plurality of elongate thin ribs having upper edges arranged in a substantially coplanar relationship, the plurality of mounting pins being secured to the upper edge of the ribs.
31. (previously presented) A sieve bed comprising a first and a second sieve element with edges arranged in abutting juxtaposition and having a plurality of the mounting pins of claim 6 attached thereto, the juxtaposed edges of the sieve elements having recesses formed therein and arranged such that a pair of adjacent recesses work together to form a receptacle complementary to the shape of the mounting pin head, the sieve elements being configured to be secured to the support frame by engaging one of the plurality of mounting pins in the receptacle.
- 32 through 54 (canceled)

55. (currently amended) A support frame for a sieve bed comprising:

a plurality of elongate thin ribs having upper edges arranged in a substantially coplanar relationship; and

a plurality of mounting pins, each generally cylindrical mounting pin comprising a head having an upper surface intersecting with an under surface at an outer edge spaced away from an axis of symmetry of the head, the upper surface generally tapering substantially continuously from the outer edge towards the axis of symmetry, the under surface forming a first angle from the axis of symmetry that is greater than a second angle formed from the upper surface to the axis of symmetry, each mounting pin further comprising a stem having a narrower cross-section than the head, the stem being adjacent to the under surface of the head and extending away from the head to a distal end, the distal end having a mounting mechanism configured to attach to one of the plurality of elongate thin ribs.

56. (currently amended) A sifting machine comprising:

a subframe;

a support frame that rests on and is secured to the subframe, the support from comprising a plurality of elongate thin ribs having upper edges arranged in a substantially coplanar relationship; and

a plurality of mounting pins, each generally cylindrical mounting pin comprising a head having an upper surface intersecting with an under surface at an outer edge spaced away from an axis of symmetry of the head, the upper surface generally tapering substantially continuously from the outer edge towards the axis of symmetry, the under surface forming a first angle from the axis of symmetry that is greater than a second angle formed from the upper surface to the axis of symmetry, each mounting pin further comprising a stem having a narrower cross-section than the head, the stem being adjacent to the under surface of the head and extending away from the head to a distal end, the distal end having a mounting mechanism configured to attach to one of the plurality of elongate thin ribs; and

a first and a second sieve elements with edges arranged in abutting juxtaposition, the juxtaposed edges having recesses formed therein and arranged such that a pair of adjacent recesses work together to form a receptacle complementary to the shape of one of the plurality of mounting pin heads, the sieve elements being secured to the support frame by engaging one of the plurality of mounting pins in the receptacle.

57 through 61 (canceled)